

# The Impact Of Geographic Location, Industry Type, Number Of Employees And Years In Business On The Economic Success Of Minority Women Entrepreneurs

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## ABSTRACT

*The topic of entrepreneurship is central in both scholarly and public policy discussions of minority businesses, yet few studies have examined the factors leading to economic success for minority women entrepreneurs. This paper partially addresses the oversight by analyzing Dun and Bradstreet data on businesses owned by Asian, Hispanic, Native American, Indian and Black women, focusing on the relationship between sales volume (the dependent variable) and number of employees, years in business, race and industry type (the independent variables). The results from this paper add a new dimension to this line of research, building on previous studies that document the growing significance of entrepreneurship among minority women. The results show that there is indeed an impact on sales volume by number of employees, years in business, race and industry type.*

## INTRODUCTION AND LITERATURE REVIEW

One of the strongest arguments for promoting minority enterprises is that such businesses provide their owners with an escape route from discrimination and lack of upward mobility denied them in the mainstream labor market (Wilson and Portes, 1980; Zhou and Logan, 1989; Haddleston-Mattai, 1995). It has been widely acknowledged that minority owned enterprises are often small and undercapitalized and might provide little opportunity for employment of others or socioeconomic advancement of their owners (Brimmer and Terrell, 1971; Bates, 1997; Sanders and Nee, 1987). Nonetheless, small businesses do create the majority of new jobs in an economy (Birch, 1987) and their impact on the advancement of any country's economy cannot be denied (Maysami and Goby, 1999). With this in mind, it is reasonable to surmise that a look at the factors leading to the economic success of minority women enterprises deserve a special focus in the realm of the entrepreneurship literature.

This paper and its resulting focus can, in a modest way, be a benefit to the literature on women, minority women, entrepreneurship and most notably, minority women entrepreneurs. The factors impacting the economic success of women entrepreneurs takes on a new dimension when one considers the special case of women-owned minority businesses with a focus across racial lines. Minority women are of special importance since their dual dimension has lead to them being considered as occupying a "double-disadvantaged" position in the labor force, owing to the hardships caused by racism and sexism (Smith and Tienda, 1998; Haddleston-Mattai, 1995).

In addition, studies have shown that the number of minority women who own businesses is growing (see Table 1), not only because of their improvements in their human and financial capital positions, but also because of the alternatives these improvements have provided this faction of women. The contribution of minority women to the expansion of the entrepreneurial sector has, accordingly, received widespread attention (Light and Gold, 2000; Smith-

Hunter, 2003; Inman, 2000). However, despite their rising interests, few studies have examined the factors leading to economic success of women-owned minority businesses. In addition, almost none of these studies have done so with an emphasis across racial strata. This oversight is remarkable, since the contribution of minority women entrepreneurs has been a central and dominant topic of research in the entrepreneurship literature for the last fifteen years (Light and Gold, 2000; Smith-Hunter, 2003; Inman, 2000; Maysami and Goby, 1999; Loscocco and Robinson, 1991; Moore and Buttner, 1997).

Overall, the literature on women's business ownership suggests that, in terms of both entrepreneurial options (e.g., occupational choices) and entrepreneurial resources (e.g., sources of capital), women are more disadvantaged than men, and minority women are more disadvantaged than white women. These findings are, of course, well known. However, they are rarely scrutinized with a cross-comparative focus across racial lines for women only. Moreover, relatively few studies have examined racial differences in women's business ownership by investigating, for example, possible differences in the industry type of minority women business owners and the impact of this on economic success.

A few of the studies to look specifically at economic success among women business owners were undertaken by Loscocco and Leicht (1993) and Loscocco et al (1991). Loscocco and Leicht (1993) conducted a telephone survey of men and women who owned health service businesses, eating and drinking establishments, and computer sales and software companies in 12 Indiana counties. The study looked at economic success factors such as gross receipts of the business, as well as owners' earnings received from the business. The results showed gender similarity in the processes through which earnings were determined, although there were differences in many of the predictor variables (Lozcocco and Leicht, 1993). In addition, while there were differences in female versus male business owners, the gender discrepancies in sales volume and earnings among the business owners was not seen as particularly wide (Lozcocco and Leicht, 1993).

The study by Loscocco et al (1991) looked at the financial success of female and male small business owners. The data came from a pilot study of small businesses in the New England area, with information collected from mailed questionnaires. The authors concluded that the relatively small size of women owned businesses was the major factor explaining their financial disadvantage, when compared to their male counterparts (Lozcocco et al, 1991). In addition, the authors concluded that the lack of experience and their concentration in less profitable industries also contributed to the women's unfavorable financial position (Lozcocco et al, 1991). The factors leading to the success of women business owners on an international level are presented in Table 3 on page 6.

Another area of interest when analyzing the economic returns for women entrepreneurs is that of home based businesses. The general consensus is that women in home-based businesses tend to earn lower economic returns when compared to other groups (Becker and Moen, 1999; Edwards and Field-Hendrey, 1996; Furry, 1992). This phenomenon can partly be explained by three key reasons. The first reason is the types of industries in which women tend to be involved. Women home-based owners are more likely to operate businesses that are seen as a hobby or an extension of their gendered roles as homemakers compared to their counterparts who locate outside of the home. Such gendered types of businesses have been referred to as "pink collar" businesses by some authors (Ehlers and Main, 1998). Such industries often offer lower returns for their participants (Lozcocco and Robinson, 1991; Moore and Buttner, 1997; Smith-Hunter, 2003).

The second reason is the lowered number of hours women involved in home based businesses tend to work because of their other commitments (Priestnitz, 1989; Olson, 1997; Edwards and Field-Hendrey, 1996). A third reason that has been advanced for the lowered earnings is the smaller amount of initial capital that women home based business owners have to start a business (Priestnitz, 1989). This latter reason has been used to explain why women are more likely to locate a business in the home in the first place (Priestnitz, 1989). International studies that have assessed factors that have contributed to women business owners' success are summarized in Table 2.

The inroads that minority women entrepreneurs are making into the economy in general, and the small business sector in particular are societal trends that are deserving of scholarly investigation. The goal of this paper is to add to the literature on entrepreneurship by filling the conspicuous gap in knowledge regarding a comparative

analysis of minority women entrepreneurs. This article answers four main groups of questions. First, what are the relationships between race and number of employees, geographic location of a business, type of business, years in business and sales volume? In a related query, the second question looks at what are the relationships between sales volume and years in business, geographic location, types of business and number of employees? A third question looks at the impact of race, geographic location, industry type, number of employees and years in business (independent variables) on sales volume (a dependent variable). A final question looks at the preceding relationship, holding race constant.

To answer these questions, we examine data, collected by Dun and Bradstreet, on women-owned minority businesses, studying those establishments that have positive values for net worth and are classified as Asian-, Hispanic- or Black-owned. These data provide valuable information on the attributes of women-owned minority businesses that cannot be obtained from other sources, such as the U.S. Bureau of the Census. The focus on Asian, Hispanics, Native Americans, Indians and Blacks reflects the traditional concern of the literature on ethnic enterprises with the various minority groups of the American society.

## **DATA AND ANALYSES**

One of the most reputable database firms in the United States, Dun and Bradstreet obtains information from millions of public and private businesses – many of which volunteer to be surveyed – as well as from trade tapes, trade associations, court records, government documents, inter-business publications, banks and other financial institutions. In the present study, Dun and Bradstreet (2003) data were used to build a sample frame that was stratified by geographic region, gender, industry (using the Standard Industry Code), sales volume, number of employees and number of years in businesses. The enterprises included in this frame were located mainly in those cities with the 10 largest populations of women-owned businesses, based on the U.S. Census of 2000, namely: New York, Los Angeles, Chicago, Houston, San Diego, Dallas, San Francisco, Phoenix, San Antonio, and Seattle, with additional data from a few others. In building the sample frame, no restrictions were placed on annual financial figures or number of employees. However, to be included, the businesses had to have been in existence for at least a year.

## **DESCRIPTIVE STATISTICS**

Table 3, 4 and 5 shows the descriptive statistics. Several findings are worthy of note.

- Businesses owned by Native Americans (n=66) have the highest figures for the sales volume, average employees per business and average years in business (see Table 3).
- Most of the women businesses are found in the services industry, followed by retail trade, regardless of the racial strata one looks at (see Table 4).
- Native Americans have the highest percentage of concentrations in the construction, manufacturing and the transportation, communications and public utilities industries compared to the other four racial groups (see Table 4).
- The top three majority States for Hispanics are California, Florida and Texas. For Blacks the top three States are Texas, California and Georgia. For Asians, the top three States are California, New York and Texas. For Indians the top three States are California, New York and Illinois and for Native Americans the top three States are California, Texas and Arizona (see Table 5).

## **CHI-SQUARE RESULTS**

Table 6 represents the chi-square values for the relationship between race and other variables. There was a significant ( $p = 0.00$ ) relationship found between race and the following: geographic location, type of business and sales volume. The two relationships that were found not to be significant were race and number of years in business and race and number of employees. Alternatively, Table 7 indicates that there were significant results ( $p = 0.00$ ) found between sales volume and the following: geographic location, years in business, type of business and number of employees.

TABLE 1 - Minority-Owned Firms In The United States: 2002

	Minority Women-Owned Firms	All Minority Owned Firms	% Change 1997-2002	Share of All Firms
<b>All Minorities:</b>				
Number of Firms	1,214,309	3,941,536	31.5	30.8
Employment	822,357	6,223,536	5.7	13.2
Sales (\$000)	\$100,571,001	\$945,110,859	18.8	10.6
<b>African American:</b>				
Number of Firms				
Employment	365,110	1,035,514	16.7	35.3
Sales (\$000)	197,151	787,332	16.6	25.0
	\$14,485,453	\$94,379,957	6.9	15.3
<b>Asian &amp; Pacific Islander:</b>				
Number of Firms	358,503	1,258,806	44.6	28.5
Employment	370,101	3,654,527	18.0	10.1
Sales (\$000)	\$49,069,703	\$543,079,183	28.8	9.0
<b>Hispanic:</b>				
Number of Firms	470,344	1,560,583	39.3	30.1
Employment	197,868	1,685,528	-15.7	11.7
Sales (\$000)	\$29,410,201	\$277,478,239	7.7	10.6
<b>Native American and Alaska Native:</b>				
Number of Firms	77,483	272,041	44.6	28.5
Employment	87,466	495,427	18.0	17.7
Sales (\$000)	\$8,700,015	\$60,767,210	28.8	14.3

Center for Women's Business Research (2004). Minority women-owned businesses in the United States, 2001: A fact sheet. Retrieved June 1, 2004, from [www.womensbusinessresearch.org/minorityreports.html](http://www.womensbusinessresearch.org/minorityreports.html)

TABLE 2 - Factors That Contributed to the Success of Women Business Owners

Factors	Teo (1996)	Deng, Hassan and Jivan (1995)	Rashid (1996)	Hisrich and O'Brien (1981)	Kelly (1985)	Leo- Gosselin And Grise (1990)	Bachemin (1989)	Woodward (1988)	Kotter (1982)
Countries	S	A	S	USA	C	N	USA	USA	USA
Family Support		*		*					
Knowledge of Culture and Language		*							
Communication Skills			*					*	*
Human Relation Skills			*						
Personal Qualities	*	*		*		*			
Knowledge of Product and Service	*								
Quality of Product and Service	*					*			
Customer Loyalty	*								
Quality of Personnel	*								
Availability of Professional Services	*				*				
Technological Advantage	*								
Availability of Finance	*								
Presence of Opportunities							*		
Desire To Succeed				*	*		*		

S=Singapore, C=Canada, N=Netherlands, A=Asia, USA=United States of America

**Source:** Maysami, R. and Goby, V. (1999). "Female Business Owners in Singapore and Elsewhere: A Review of Studies". *Journal of Small Business Management*, 37 (2), 96-105.

TABLE 3 - Miscellaneous Descriptive Statistics

Race	Number of Businesses	Average Sales Volume Per Business (\$)	Average Employees Per Business	Average Sales Per Employee (\$)	Average Years In Business
Asians	384 (29.63%)	1,374,561	9	152,069	12.77
Blacks	369 (28.47%)	737,679	11	69,263	12.82
Hispanics	394 (30.40%)	669,951	7	100,289	12.58
Indians	83 (6.40%)	1,022,980	9	118,091	12.51
Native Americans	66 (5.09%)	2,224,701	27	82,212	13.64
<b>Total</b>	<b>1,296</b>	<b>807,651</b>	<b>8</b>	<b>98,965</b>	<b>12.90</b>

TABLE 4 - Industry Type By Race

Industry Type	Total	Asians	Blacks	Hispanics	Indians	Native Americans
Agriculture, Forestry, Fishing	11 (0.85%)	5 (1.3%)	2 (0.05%)	3 (0.07%)	0 (0%)	1 (1.51%)
Construction	51 (3.94%)	8 (2.08%)	17 (4.60%)	16 (4.06%)	3 (3.61%)	7 (10.60%)
Manufacturing	66 (5.09%)	27 (7.03%)	10 (2.71%)	19 (4.82%)	3 (3.61%)	7 (10.60%)
Transportation Communications & Public Utilities	59 (4.55%)	14 (3.64%)	23 (6.23%)	15 (3.80%)	2 (2.40%)	5 (7.57%)
Wholesale Trade	111 (8.56%)	54 (14.06%)	23 (6.23%)	21 (5.32%)	9 (10.84%)	4 (6.06%)
Retail Trade	280 (21.60%)	117 (30.47%)	40 (10.84%)	94 (23.86%)	16 (19.27%)	13 (19.69%)
Finance, Insurance and Real Estate	59 (4.55%)	17 (4.42%)	19 (5.15%)	17 (4.31%)	5 (6.02%)	1 (1.51%)
Services	659 (50.85%)	142 (36.97%)	235 (63.68%)	209 (53.04%)	45 (54.21%)	28 (42.42%)
<b>Total</b>	<b>1296</b>	<b>384</b>	<b>369</b>	<b>394</b>	<b>83</b>	<b>66</b>

TABLE 5 - Geographic Location By Race

Geographic Location	Total	Asians	Blacks	Hispanics	Indians	Native Americans
Arizona	31 (2.39%)	8 (2.08%)	6 (1.62%)	10 (2.53%)	1 (1.20%)	6 (9.09%)
California	455 (35.11%)	203 (52.86%)	68 (18.42%)	136 (34.51%)	24 (28.91%)	24 (36.36%)
Florida	106 (8.18%)	5 (1.30%)	21 (5.69%)	77 (19.54%)	2 (2.40%)	1 (1.51%)
Georgia	98 (7.56%)	12 (3.12%)	61 (16.53%)	12 (3.04%)	8 (9.63%)	5 (7.57%)
Illinois	133 (10.26%)	31 (8.07%)	49 (13.27%)	36 (9.13%)	12 (14.45%)	5 (7.57%)
Michigan	80 (6.17%)	13 (3.38%)	42 (11.38%)	10 (2.53%)	10 (12.04%)	5 (7.57%)
New York	174 (13.43%)	62 (16.14%)	44 (11.92%)	49 (12.43%)	15 (18.07%)	4 (6.06%)
Texas	176 (13.58%)	33 (8.59%)	69 (18.69%)	50 (12.69%)	11 (13.25%)	13 (19.69%)
Washington	43 (3.32%)	17 (4.42%)	9 (2.43%)	14 (3.55%)	0 (0%)	3 (4.54%)
<b>Total</b>	<b>1296</b>	<b>384</b>	<b>369</b>	<b>394</b>	<b>83</b>	<b>66</b>

TABLE 6 - Chi-Square Relationships Of Race And Other Variables

Relationships	Chi-Square Values	P Values
Race and Geographic Location	303.60	0.00
Race and Years in Business	26.18	0.16
Race and Type of Business	117.36	0.00
Race and Number of Employees	15.76	0.47
Race and Sales Volume	47.36	0.00

**TABLE 7 - Chi-Square Relationships Of Sales Volume And Other Variables**

<b>Relationships</b>	<b>Chi-Square Values</b>	<b>P Values</b>
Sales Volume Geographic Location	91.99	0.01
Sales Volume and Years in Business	58.07	0.03
Sales Volume and Type of Business	313.15	0.00
Sales Volume and Number of Employees	1473.45	0.00
Sales Volume and Race	47.36	0.00

**REGRESSION ANALYSES**

The first regression analysis used sales volume as the dependent variable and number of employees, years in business, type of business and race as independent variables. It should be noted that the default variable for the race category is "American Indian" and the default variable for the type of industry category is "services". The results are presented in Table 8 and indicate that the independent variables predict approximately 40.66% of the dependent variable. This can be restated to mean that the R-square value for the dependent variable is only being accounted for by 40.66% of the independent variables.

Table 9 again looks at another regression analysis and again sales volume is the dependent variable. However, in this instance, the race variable is held constant and the number of years in business, number of employees and type of business are being used as independent variables. With race held constant, the R-square value drops to 40.49%, indicating that the independent variables can now explain 40.49% of the dependent variable.

**TABLE 8 - Regression Results: Sales Volume (Dependent Variable) And Years In Business, Number Of Employees, Type Of Business And Race (Independent Variables)**

<b>Variables</b>	<b>Beta Coefficients</b>	<b>P Values</b>
Intercept	-285321.51	0.639
Number of Employees	84155.30	1.89E
Years in Business	-5529.08	0.695
Asian	553236.32	0.363
Black	-80410.85	0.895
Hispanic	255390.38	0.673
Indian	306200.93	0.683
Agriculture, Forestry, Fishing	-114789.12	0.933
Construction	895155.60	0.171
Manufacturing	267937.71	0.648
Manufacturing, Transportation, Communications, Public Utilities	1157792.64	0.062
Wholesale Trade	2581165.39	4.63E
Retail Trade	-64740.47	0.845
Finance, Insurance, Real Estate	64758.93	0.916

R-Square = 0.4066, N = 1276

**TABLE 9 - Regression Results: Sales Volume (Dependent Variable) And Years In Business, Number Of Employees, Type Of Business (Independent Variables). Race Held Constant.**

Variables	Beta Coefficients	P Values
Intercept	-89060.02	0.720
Number of Employees	83956.66	5.465E
Years in Business	-5680.72	0.687
Agriculture, Forestry, Fishing	-1206.28	0.999
Construction	861816.19	0.186
Manufacturing	381615.44	0.512
Manufacturing, Transportation, Communications, Public Utilities	1136742.48	0.066
Wholesale Trade	2715027.30	5.109E
Retail Trade	64044.22	0.843
Finance, Insurance, Real Estate	110258.37	0.857

R-Square = 0.4049, N = 1276

## DISCUSSION AND CONCLUSION

The last several years has witnessed a number of articles focused on the growing interest on women entrepreneurs. Surprisingly however, few of that research have examined minority women entrepreneurs exclusive of outside comparisons and internally across various minority racial lines. This paper focused on the impact of geographic location, industry type, number of employees and number of years in business on the economic success of minority women entrepreneurs. The findings were mixed. On the one hand, there was a relatively small R square value when looking at the regression analysis. On the other hand, the value (0.4066) could be seen as relatively large, considering only four variables were used in the regression analysis. When race was held constant, there was very little change in the R-square value. Moreover, there were significant relationships found between race and the following: geographic location, type of business and sales volume and between sales volume and the following: geographic location, years in business, type of business and number of employees.

These findings can serve as precursors to more intricate regression analyses that can include, in addition to the significantly related correlation factors, other factors that would be expected to provide significant results.

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**Notes**